

A3

8. (Once Amended) The method of claim 6, wherein the probe is created by the use of primers of the sequence from the group consisting of SEQ ID NO: 6 and SEQ ID NO: 7.

14. (Once Amended) A method of detecting pentanucleotide repeats in *SCA10* comprising the steps of:

A4

isolating DNA from an individual to be tested; and

performing PCR analysis using the primers of the sequence from the group consisting of SEQ ID NO: 3 and SEQ ID NO: 4.

16. (Once Amended) A method of diagnosing spinocerebellar ataxia type 10 comprising the steps of:

isolating DNA from an individual to be tested;

performing PCR analysis using the primers of the sequence from the group consisting of SEQ ID NO: 3 and SEQ ID NO: 4;

A5

assessing the number of ATTCT repeats based on comparison to DNA from an unaffected individual; and

determining whether the number of ATTCT repeats is expanded in comparison to that of unaffected individuals.

17. (Once Amended) A method of diagnosing spinocerebellar ataxia type 10 comprising the steps of:

isolating DNA from an individual to be tested;

performing PCR analysis using the primers of the sequence from the group consisting of SEQ ID NO: 10 and SEQ ID NO: 11; and

assessing whether the number of ATTCT repeats is expanded in comparison to that of unaffected individuals.